U.S. Department of Transportation
National Highway Traffic Safety Administration

TRAFFIC SAFETY FACTS
2009 Data

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DOT HS 811 390

Occupant Protection

In 2009, 23,382 occupants of passenger vehicles (passenger cars, pickup trucks, vans, and SUVs) were killed in motor vehicle traffic crashes, 69 percent of the 33,808 traffic fatalities reported for the year.

Of the 23,382 passenger vehicle occupant fatalities in 2009, restraint use was unknown for 1,730 (7%). Of the 21,652 passenger vehicle occupant fatalities for which restraint use was known, 11,512 (53%) were unrestrained.

Seat belt use in 2009 reached 84 percent, a gain from 83 percent in 2008. This result is from the National Occupant Protection Use Survey (NOPUS) which is the only survey that provides nationwide probability-based observed data on seat belt use in the United States.

The proportion of unrestrained passenger vehicle occupants killed in motor vehicle traffic crashes has decreased from 2000 to 2009. Among passenger vehicle occupants killed, when restraint use was known, the percentage of unrestrained decreased by 7 percentage points from 60 percent in 2000 to 53 percent in 2009.

Table 1
Passenger Vehicle Occupant Fatalities in Crashes by Restraint Use, 2000–2009

	Restraint Use						Total		Percent Known Restrained	Percent Known Unrestrained
	Restrained		Unrestrained		Unknown					
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
2000	11,787	37%	17,810	55%	2,628	8%	32,225	100%	40%	60%
2001	11,946	37%	17,517	55%	2,580	8%	32,043	100%	41%	59%
2002	12,533	38%	17,797	54%	2,513	8%	32,843	100%	41%	59%
2003	12,967	40%	16,764	52%	2,540	8%	32,271	100%	44%	56%
2004	13,250	42%	16,432	52%	2,184	7%	31,866	100%	45%	55%
2005	13,064	41%	16,247	51%	2,238	7%	31,549	100%	45%	55%
2006	12,710	41%	15,635	51%	2,341	8%	30,686	100%	45%	55%
2007	12,322	42%	14,446	50%	2,304	8%	29,072	100%	46%	54%
2008	10,691	42%	12,925	51%	1,846	7%	25,462	100%	45%	55%
2009	10,140	43%	11,512	49%	1,730	7%	23,382	100%	47%	53%

Age, Gender, Seating Position, and Restraint Use

Among passenger vehicle occupant fatalities where restraint use was known, the age group 13 to 15 had the highest percentage of unrestrained occupants; 268 fatalities where restraint use was known, of which 180 (67%) were unrestrained.

In 2009, 67 percent of the passenger vehicle occupants ages 13 to 15 killed in traffic crashes were not using restraints — the highest percentage out of all age groups.

The second highest percentage of unrestrained passenger vehicle occupant fatalities was 64 percent among the 21- to 24-year-olds and 25-to 34-year-olds.

In 2009, there were a total of 250 passenger vehicle occupant fatalities among children under age 4. Among the 235 fatalities in this age group for which restraint use was known, 72 (31%) were unrestrained. In the age group of 4 to 7, there were a total of 240 passenger vehicle occupant fatalities. Among the 220 fatalities in this age group for which restraint use was known, 93 (42%) were unrestrained.

Among males, there were a total of 15,285 passenger vehicle occupant fatalities. Of the 14,088 fatalities among males for which restraint use was known, 8,196 (58%) were unrestrained. Of the 8,091 fatalities among females, restraint use was known for 7,561, of which 3,313 (44%) were unrestrained.

The proportion of unrestrained passenger vehicle occupants who were seated in the front seat of a passenger vehicle was 52 percent. The proportion of unrestrained passenger vehicle occupants was higher (61%) for occupants of second row seats.

Table 2

Passenger Vehicle Occupants Killed, by Age, Gender, Seating Position, and Restraint Use, 2009

	Restrained		Unrestrained		Unknown		Total		Percent Known Restrained	Percent Known Unrestrained
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Age (Years)										
<4	163	65	72	29	15	6	250	100	69	31
4–7	127	53	93	39	20	8	240	100	58	42
8–12	117	44	130	49	17	6	264	100	47	53
13–15	88	30	180	61	29	10	297	100	33	67
16–20	1,201	36	1,880	56	268	8	3,349	100	39	61
21–24	821	33	1,447	58	210	8	2,478	100	36	64
25–34	1,320	33	2,382	59	325	8	4,027	100	36	64
35–44	1,132	38	1,595	54	217	7	2,944	100	42	58
45–54	1,365	43	1,559	50	214	7	3,138	100	47	53
55–64	1,159	50	968	42	170	7	2,297	100	54	46
65–74	1,019	61	568	34	90	5	1,677	100	64	36
75+	1,615	68	620	26	149	6	2,384	100	72	28
Unknown	13	35	18	49	6	16	37	100	42	58
Total	**10,140**	**43**	**11,512**	**49**	**1,730**	**7**	**23,382**	**100**	**47**	**53**
Gender										
Male	5,892	39	8,196	54	1,197	8	15,285	100	42	58
Female	4,248	53	3,313	41	530	7	8,091	100	56	44
Unknown	0	0	3	50	3	50	6	100	0	100
Total	**10,140**	**43**	**11,512**	**49**	**1,730**	**7**	**23,382**	**100**	**47**	**53**
Seating Position										
Front Seat										
Left	7,380	44	8,164	49	1,210	7	16,754	100	47	53
Middle	11	15	57	77	6	8	74	100	16	84
Right	2,006	49	1,802	44	277	7	4,085	100	53	47
Other/Unknown	0	0	9	90	1	10	10	100	0	100
Total	**9,397**	**45**	**10,032**	**48**	**1,494**	**7**	**20,923**	**100**	**48**	**52**
Second Seat										
Left	270	38	375	53	64	9	709	100	42	58
Middle	75	25	202	68	21	7	298	100	27	73
Right	335	37	499	55	67	7	901	100	40	60
Other/Unknown	7	23	19	61	5	16	31	100	27	73
Total	**687**	**35**	**1,095**	**56**	**157**	**8**	**1,939**	**100**	**39**	**61**
Other	45	16	224	79	14	5	283	100	17	83
Unknown	11	5	161	68	65	27	237	100	6	94
Total	**10,140**	**43**	**11,512**	**49**	**1,730**	**7**	**23,382**	**100**	**47**	**53**

Vehicle Type and Restraint Use

A total of 16,753 passenger vehicle drivers were killed in traffic crashes in 2009. Among the 15,544 driver fatalities for which restraint use was known, 53 percent (8,165) were unrestrained. Furthermore, 67 percent (2,323) of the drivers of pickup trucks killed were unrestrained, compared to 59 percent (1,527) for SUVs, 45 percent (341) for vans, and 46 percent (3,967) for passenger cars.

A total of 6,629 passengers were killed in passenger vehicles in 2009. Among the 6,108 passenger fatalities for which restraint use was known, 55 percent (3,347) were unrestrained. Furthermore, among the passenger fatalities for which restraint use was known, 70 percent of the passengers in pickup trucks were unrestrained, compared to 63 percent for SUVs, 52 percent for vans, and 48 percent for passenger cars.

Table 3

Drivers and Passengers Killed, by Passenger Vehicle Type and Restraint Use, 2009

Type of Passenger Vehicle	Restrained		Unrestrained		Unknown		Total		Percent Known Restrained	Percent Known Unrestrained
	Number	Percent	Number	Percent	Number	Percent	Number	Percent		
Drivers Killed										
Passenger Cars	4,749	50	3,967	42	719	8	9,435	100	54	46
Pickup Trucks	1,152	31	2,323	62	249	7	3,724	100	33	67
Sport Utility Vehicles	1,058	38	1,527	55	169	6	2,754	100	41	59
Vans	418	50	341	41	71	9	830	100	55	45
Other Light Trucks	2	20	7	70	1	10	10	100	22	78
Total	**7,379**	**44**	**8,165**	**49**	**1,209**	**7**	**16,753**	**100**	**47**	**53**
Passengers Killed										
Passenger Cars	1,756	48	1,602	44	302	8	3,660	100	52	48
Pickup Trucks	296	28	692	65	80	7	1,068	100	30	70
Sport Utility Vehicles	457	34	782	58	98	7	1,337	100	37	63
Vans	252	45	271	48	41	7	564	100	48	52
Other Light Trucks	0	0	0	0	0	0	0	0	0	0
Total	**2,761**	**42**	**3,347**	**50**	**521**	**8**	**6,629**	**100**	**45**	**55**

Seat Belt Use and Benefits

Research has found that lap/shoulder seat belts, when used, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.

Ejection from the vehicle is one of the most injurious events that can happen to a person in a crash. In fatal crashes in 2009, 77 percent of passenger vehicle occupants who were totally ejected from the vehicle were killed. Seat belts are effective in preventing total ejections: only 1 percent of the occupants reported to have been using restraints were totally ejected, compared with 31 percent of the unrestrained occupants.

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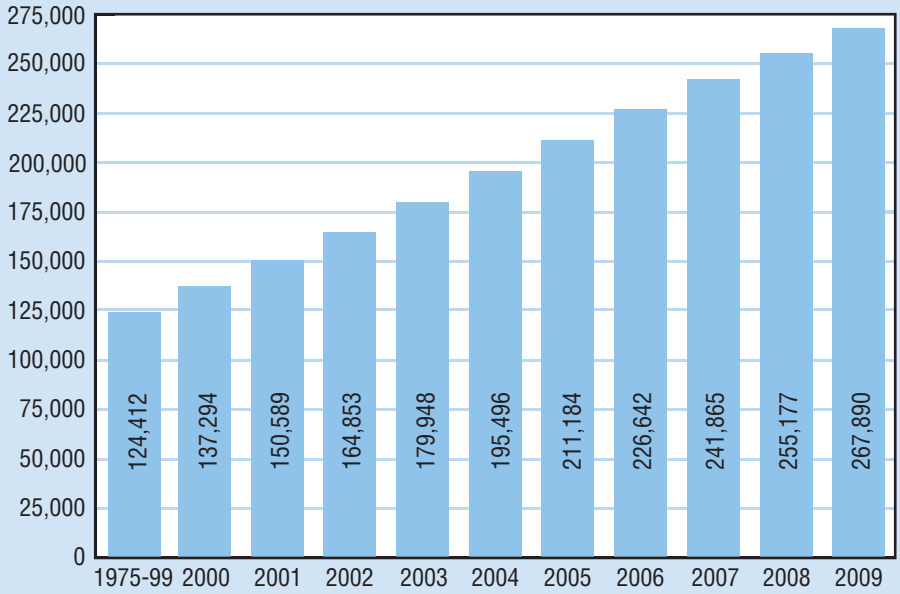
Lives Saved by Seat Belts

In 2009, seat belts saved an estimated 12,713 lives among passenger vehicle occupants age 5 and older.

Among passenger vehicle occupants age 5 and older, seat belts saved an estimated 12,713 lives in 2009. If all passenger vehicle occupants age 5 and older had worn seat belts, 16,401 lives (that is an additional 3,688) could have been saved in 2009.

Figure 1
Cumulative Estimated Number of Lives Saved by Seat Belts, 1975–2009

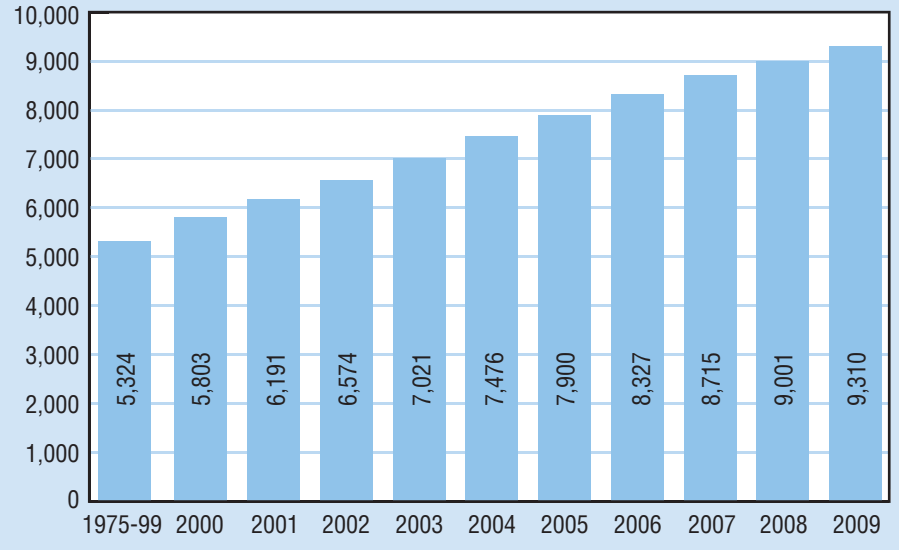


Child Restraint Use and Benefits

Research on the effectiveness of child safety seats has found them to reduce the risk of fatal injury by 71 percent for infants (younger than 1 year old) and by 54 percent for toddlers (1 to 4 years old) in passenger cars. For infants and toddlers in light trucks, the corresponding reductions are 58 percent and 59 percent, respectively.

From 1975 through 2009, an estimated 9,310 lives were saved by child restraints.

Figure 2
Cumulative Estimated Number of Lives Saved by Child Restraints, 1975-2009



Child restraints used for infants and toddlers age 4 and younger.

Lives Saved by Child Safety Seats

Among children under age 5, an estimated 309 lives were saved in 2009 by restraint use. Of these 309 lives saved, 284 were associated with the use of child safety seats and 26 with the use of adult seat belts.

At 100-percent child safety seat use for children under age 5, an estimated 372 lives (that is, an additional 63) could have been saved in 2009.

Frontal Air Bag Use and Benefits

Frontal air bags, combined with lap/shoulder belts, offer effective safety protection for passenger vehicle occupants. NHTSA analyses indicated a fatality-reducing effectiveness for frontal air bags of 14 percent when no seat belt was used and 11 percent when a seat belt was used in conjunction with frontal air bags.

Frontal air bags, combined with lap/shoulder belts, offer effective safety protection for passenger vehicle occupants.

It is estimated that, as of 2009, 184 million air-bag-equipped passenger vehicles were on the road, including 175 million with dual air bags.

Air bags are supplemental protection and are not designed to deploy in all crashes. Most are designed to inflate in a moderate-to-severe frontal crash.

Some crashes at lower speeds may result in injuries, but generally not the serious injuries that air bags are designed to prevent. For this and other reasons, lap/shoulder belts should always be used, even in vehicles with air bags.

Children in rear-facing child safety seats should not be placed in the front seat of vehicles equipped with passenger-side air bags. The impact of a deploying air bag striking a rear-facing child safety seat could result in serious injury to the child.

Lives Saved by Frontal Air Bags

In 2009, an estimated 2,381 lives were saved by frontal air bags. From 1987 to 2009, a total of 30,232 lives were saved.

Table 4
Estimated Number of Lives Saved by Restraint Systems, 1975-2009

Restraint Type	1975-99	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
Seat Belts	124,412	12,882	13,295	14,264	15,095	15,548	15,688	15,458	15,223	13,312	12,713	267,890
Child Restraints	5,324	479	388	383	447	455	424	427	388	286	309	9,310
Frontal Air Bags	5,721*	1,716	1,978	2,324	2,519	2,660	2,752	2,824	2,800	2,557	2,381	30,232

*Note: Total from 1987-1999. Frontal air bags did not exist prior to 1987.

Seat belt use rates in the States, the District of Columbia, and Puerto Rico in 2009 are shown in the last column in Table 5. The results were obtained by observing traffic on roads at selected observation sites. For more information on seat belt use rates, see the Crash*Stat titled Seat Belt Use in 2009—Use Rates in the States and Territories (DOT HS 811 324).

Between 1987 and 2009, 30,232 lives were saved by frontal air bags.

The overall observed seat belt use rate was 84 percent in 2009, compared to 82 percent in 2005, and 73 percent in 2001. In 1994, the overall observed seat belt use rate was 58 percent.

Table 5

Passenger Vehicle Occupants Killed, by State and Restraint Use, and Observed Seat Belt Use Rate by State, 2009

State	Restraint Use						Total Occupants Killed		Observed Seat Belt Use Rate*
	Restrained		Unrestrained		Unknown				
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Alabama	263	40	378	57	20	3	661	100	90.0%
Alaska	19	48	12	30	9	23	40	100	86.1%
Arizona	160	35	240	52	60	13	460	100	80.8%
Arkansas	157	35	247	55	43	10	447	100	74.4%
California	1,149	60	639	33	129	7	1,917	100	95.3%
Colorado	125	41	168	55	11	4	304	100	81.1%
Connecticut	58	39	69	46	22	15	149	100	85.9%
Delaware	35	43	40	49	6	7	81	100	88.4%
Dist of Columbia	2	20	4	40	4	40	10	100	93.0%
Florida	625	41	846	56	44	3	1,515	100	85.2%
Georgia	354	39	454	49	111	12	919	100	88.9%
Hawaii	16	31	27	52	9	17	52	100	97.9%
Idaho	67	41	89	55	7	4	163	100	79.2%
Illinois	299	48	264	42	65	10	628	100	91.7%
Indiana	239	48	206	41	55	11	500	100	92.6%
Iowa	125	46	124	45	24	9	273	100	93.1%
Kansas	109	37	169	57	20	7	298	100	77.0%
Kentucky	265	43	352	57	2	0	619	100	79.7%
Louisiana	193	33	351	61	35	6	579	100	74.5%
Maine	50	43	50	43	17	15	117	100	82.6%
Maryland	192	55	129	37	25	7	346	100	94.0%
Massachusetts	60	28	112	52	43	20	215	100	73.6%
Michigan	303	51	199	34	87	15	589	100	98.0%
Minnesota	128	44	117	40	49	17	294	100	90.2%
Mississippi	180	32	380	68	1	0	561	100	76.0%
Missouri	220	32	417	61	48	7	685	100	77.2%
Montana	57	35	101	62	5	3	163	100	79.2%
Nebraska	59	32	108	58	20	11	187	100	84.8%
Nevada	68	45	74	49	8	5	150	100	91.0%
New Hampshire	30	38	49	62	0	0	79	100	68.9%
New Jersey	182	54	144	43	11	3	337	100	92.7%
New Mexico	137	52	124	48	0	0	261	100	90.1%
New York	343	54	208	33	88	14	639	100	88.0%
North Carolina	494	51	417	43	51	5	962	100	89.5%
North Dakota	39	33	74	62	6	5	119	100	81.5%
Ohio	267	37	399	56	50	7	716	100	83.6%
Oklahoma	211	38	306	55	35	6	552	100	84.2%
Oregon	151	56	96	36	21	8	268	100	96.6%
Pennsylvania	310	36	446	52	102	12	858	100	87.9%
Rhode Island	9	20	30	67	6	13	45	100	74.7%
South Carolina	249	37	381	57	43	6	673	100	81.5%
South Dakota	28	26	76	70	4	4	108	100	72.1%
Tennessee	286	38	424	57	39	5	749	100	80.6%
Texas	1,043	48	947	44	165	8	2,155	100	92.9%
Utah	81	46	85	48	12	7	178	100	86.1%
Vermont	22	41	28	52	4	7	54	100	85.3%
Virginia	233	41	322	57	13	2	568	100	82.3%
Washington	175	52	129	38	33	10	337	100	96.4%
West Virginia	93	33	152	54	39	14	284	100	87.0%
Wisconsin	149	37	231	57	28	7	408	100	73.8%
Wyoming	31	28	78	71	1	1	110	100	67.6%
U.S. Total	**10,140**	**43**	**11,512**	**49**	**1,730**	**7**	**23,382**	**100**	84%
Puerto Rico	65	38	104	62	0	0	169	100	92.3%

Shaded: States with primary seat belt laws in 2009. *Crash*Stats (DOT HS 811 324) dated May 2010

Restraint Use Laws

The U.S. Department of Transportation's July 1984 rulemaking on automatic occupant protection began a wave of legislative action that resulted in the enactment of seat belt use laws in many States. The goal of those laws is to promote belt use and thereby reduce deaths and injuries in motor vehicle crashes.

The first mandatory belt use law was enacted in the State of New York in 1984. Adult belt use laws are now in effect in 49 States and the District of Columbia. The laws differ from State to State, according to the type and age of the vehicle, occupant seating position, etc.

In 19 of the States with belt use laws, the law specifies secondary enforcement. That is, police officers are permitted to write a citation only after a vehicle is stopped for some other traffic infraction. Thirty States, Puerto Rico, and the District of Columbia have laws that allow primary enforcement, enabling officers to stop vehicles and write citations whenever they observe violations of the seat belt law.

The first mandatory child restraint use law was implemented in the State of Tennessee in 1978. Since 1985, all 50 States and the District of Columbia have had child restraint use laws in effect. These laws also cover various segments of the population.

A 2008 NHTSA research note, *States With Primary Enforcement Laws Have Lower Fatality Rates (Updated),* indicated that States with primary enforcement seat belt laws achieved significantly higher belt use than did those with secondary enforcement laws. The analysis suggests that belt use among fatally injured occupants was at least 13 percentage points higher in States with primary enforcement laws.

For more information:

Information on traffic fatalities is available from the National Center for Statistics and Analysis (NCSA), NVS-424, 1200 New Jersey Avenue SE., Washington, DC 20590. NCSA can be contacted at 800-934-8517 or via the following e-mail address: ncsaweb@dot.gov. General information on highway traffic safety can be accessed by Internet users at www.nhtsa.gov/NCSA. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

Other fact sheets available from the National Center for Statistics and Analysis are Alcohol-Impaired Driving, Bicyclists and Other Cyclists, Children, Large Trucks, Motorcycles, Older Population, Overview, Passenger Vehicles, Pedestrians, Race and Ethnicity, Rural/Urban Comparisons, School Transportation-Related Crashes, Speeding, State Alcohol Estimates, State Traffic Data, and Young Drivers. Detailed data on motor vehicle traffic crashes are published annually in Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System. The fact sheets and annual Traffic Safety Facts report can be accessed online at www-nrd.nhtsa.dot.gov/CATS/index.aspx.